

Amendments to the Specification:

Please replace the pending paragraph on page 16, lines 12-24 with the following amended paragraph:

The only data link between printbar 10 and sensor 30, through which information is passed, is the light transfer. Sensor 34 generates a readout current I_s which is carried on feedback circuit lines 38, 39. This sensor readout current I_s is delivered to a comparator 112, and compared to an external reference current I_R . The value of external reference I_R is a parameter of the system set by a user or during system design. Comparator 112 measures the difference between readout current I_s and reference current I_R to obtain an offset current I_{OFFSET} , which is delivered to current/voltage converter 114, and this voltage is in turn provided to analog-to-digital (A/D) converter 116. In this embodiment A/D converter [[114]] 116 is shown as a four-bit A/D converter. These four bits are routed to a set of low frequency shift-registers being used as an electronic look-up table 118, which in this embodiment is comprised of four shift registers 118a-d. Each bit of data enters the shift registers and ripples through as shown by arrow 120.